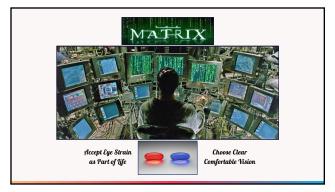


Michelle J. Hoff, OD, FAAO, ABOM, FNAO University of California Berkeley | Associate Professor of Health Sciences Mindful Eyes Foundation | Founder and Executive Director SightLine Ophthelmic Consulting | Co-founder and CEO Doctor of Optometry (OD) Master in Ophthelmic Optics (ABOM) Registered Spectacle Lens Dispenser (CA-SLD) Licensed Optometrist (CA-DCA)

2

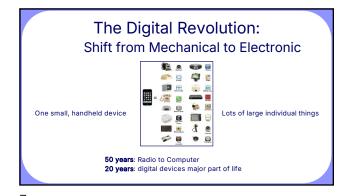
The content of this course was developed independently without commercial bias or influence Consulting Essilor Instruments, USA Visionix USA Topcon Healthcare Quest Vision Care Specialty Lab



Learning Objectives Technology Timeline Trends and Demographics Ergonomics Lens Analysis and Contour Plots Task Specific Lens Solutions Understanding Near Task Specific Lens Designs Near Variable Focus (Computer, Occupational) Intermediate/Near Powerboost Product Portfolios Case Presentations

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Technology Timeline: Over a century ago 1920's - 1930's - Radio 1940's - 1950's - B&W TV 1950's - 1990's - Color TV 1990 - present- HD TV



The Physical and Visual Response

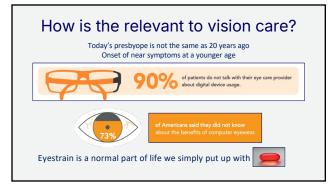
1990's: Computers are the major source of information

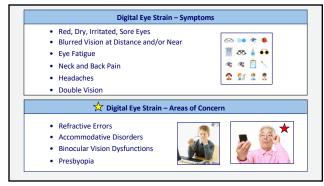


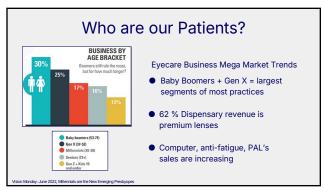
- Breakdown of DES* Symptoms
- (6 out of 10 adults report)
- 35% Neck/shoulder pain
- 27% Dry eyes
- 28% Headaches
- 32% Eye strain
- 28% Blurred vision

DES = Digital Eye Strain, formerly Computer Vision Syndrome (CVS)

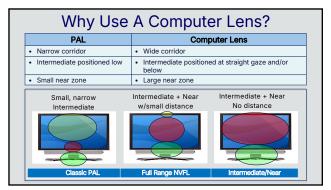
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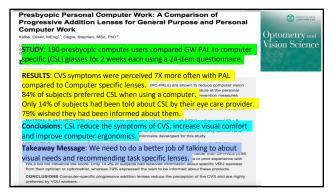


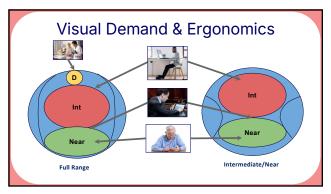




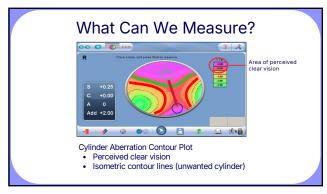


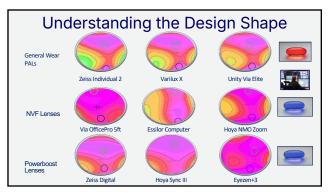


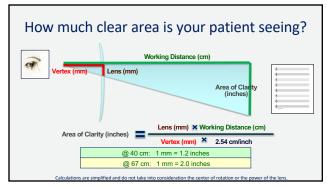


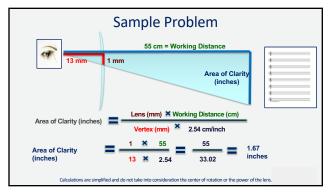


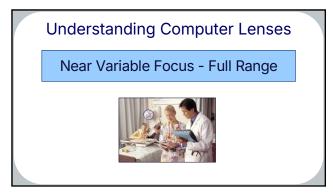


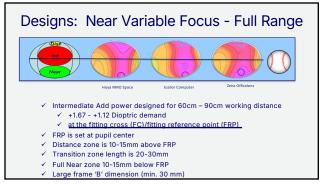


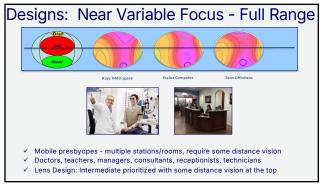


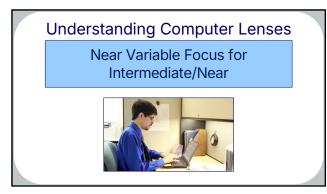




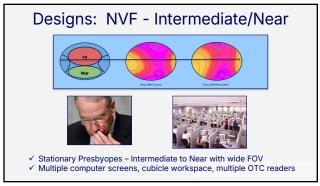


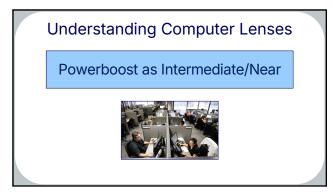




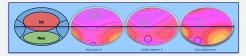


Design: NVF Int/Near Add Power for 60cm – 90cm (24-36 inch) working distance is centered around fitting reference point + 0.50 to +1.00 EA at "distance" Full Near zone 10-15mm below FRP FRP is set at pupil center Large frame 'B' dimension (min. 30 mm)





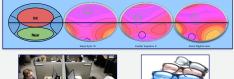
Design: Powerboost as Intermediate/Near



- ✓ "Powerboost": designed and marketed to pre-presbyopes
 ✓ Can be designed for intermediate/near use for presbyopes
- Large, wide, stable "top" half of lens: Minimal peripheral aberration, edge-toedge clarity at FRP
- ✓ Transition zone is 3-4 mm below FRP
- ✓ Corridor to full near 9-10 mm
- ✓ Can use smaller frame 'B' dimension (min. 20mm)

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Designs: Powerboost as Intermediate/Near





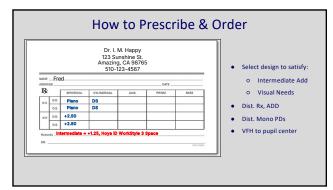


- ✓ Stationary occupation Intermediate to Near with wide FOV (no distance)
- ✓ Multiple computer screens, cubicle workspace, multiple OTC readers

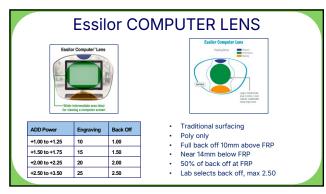
29

NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25

Depending on the ADD and Fitting Height, the software determines the corridor lengths above and below the FRP

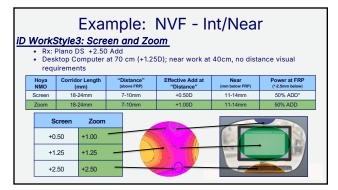


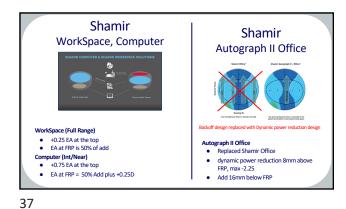




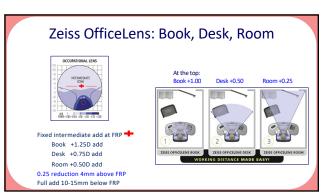
• Rx: Plano	uter 2.00 w/ Add +2.00	IVF - Fu 50% backo mputer 2.00 (<u>ff</u>	
NVF - Full Range	Transition Length	Distance (above FRP)	Near (below FRP)	Power at FRP
Computer Lens	24mm	10mm	14mm	50% of BO
+1.00 +2.00				









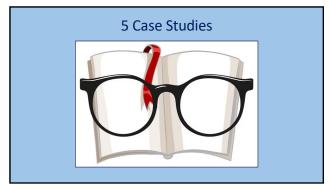


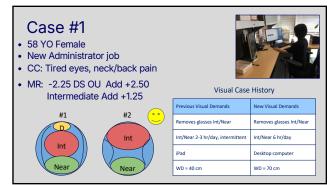
	Power Boost Lenses		Boost at the Bottom
	Zeiss Digital Lens	Digital 500 Digital 750 Digital 1000 Digital 1250	+0.50 +0.75 +1.00 +1.25
Powerboost Lenses	Eyezen	Eyezen +1 Eyezen +2 Eyezen +3 Eyezen +4	+0.40 +0.60 +0.85 +1.10
Product Portfolio	Hoya Sync III	Sync 5 Sync 9 Sync 13 Sync 20	+0.57 +0.95 +1.32 +1.89
	Unity Relieve	Relieve 50 Relieve 70	+0.50 +0.70
	Shamir Relax	Relax 50 Relax 65 Relax 80	+0.50 +0.65 +0.80

How to Desig	n a Powerboo	ost as	Intermediate/Near
EXAMPLE R	<u>x</u>		
 Determine 	with +2.25, Intermed the EA at intermediat appropriate Powerbo	e distanc	
Powerboost Lens	Boost	Fit	EA Int/Near
Sync5/Sync9/Sync13	0.55 / 0.95 1.32/1.89	Pupil	+1.25 / +1.80 +1.25 / +2.20 +1.25 / +2.57 +1.25 / +3.14
Zeiss Digital Lens	0.50 / 0.75 1.00 / 1.25	Pupil	+1.25 / +1.75 +1.25 / +2.00 +1.25 / +2.25 +1.25 / +2.50
Eyezen+ 1/2/3/4	0.40 / 0.60 / 0.85 / 1.10	Pupil	+1.25 / +1.65 +1.25 / +1.85 +1.25 / +2.10 +1.25 / +2.35
Unity Relieve 50, 70	0.50 / 0.70	Pupil	+1.25 / +1.75
Shamir Relax 50,60,80	50 / 60 / 80	Pupil	+1.25 / +1.75

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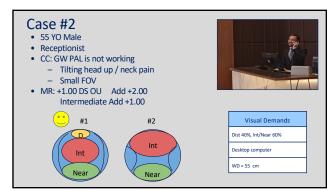
How to Prescribe & Order Powerboost for Int/Near Dr. I. M. Happy 123 Sunshine St. Amazing, CA 98765 510-123-4567 Select design (diff b/w int/near) Intermediate RX in "distance" Intermediate Mono PDs VFH to pupil center Sph Cyl Axis Add PL DS



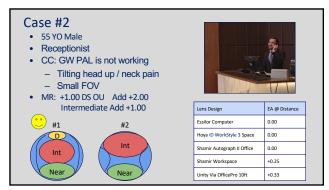


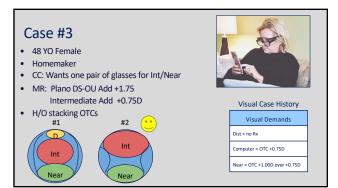
	-2.25 DS OU Int Add +1.25 Nea	ar Add +2.50
NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25

-2.25 DS OU	Power Boost Le	enses	Boost at the Bottom
Int Add +1.25 Near Add +2.50	Zeiss Digital Lens	Digital 500 Digital 750 Digital 1000 Digital 1250	+0.50 +0.75 +1.00 +1.25
Diff. b/w Int & Add = 1.25 D	Eyezen	Eyezen +1 Eyezen +2 Eyezen +3 Eyezen +4	+0.40 +0.60 +0.85 +1.10
Powerboost Lenses Product Portfolio	Hoya Sync III	Hoya Sync 5 Hoya Sync 9 Hoya Sync 13 Hoya Sync 20	+0.57 +0.95 +1.32 +1.89
	Unity Relieve	Relieve 50 Relieve 70	+0.50 +0.70
	Shamir Relax	Relax 50 Relax 65 Relax 80	+0.50 +0.65 +0.80



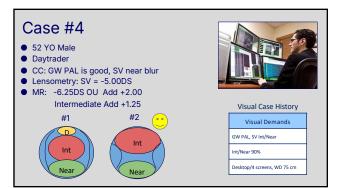
NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25





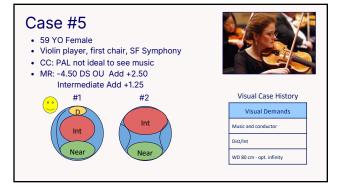
NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25

Plano	Power Boost L	enses	Boost at the Bottom
Int Add +0.75 Near Add +1.75	Zeiss Digital Lens	Digital 500 Digital 750 Digital 1000 Digital 1250	+0.50 +0.75 +1.00 +1.25
Diff. b/w Int & Add = 1.00 D	Eyezen	Eyezen +1 Eyezen +2 Eyezen +3 Eyezen +4	+0.40 +0.60 +0.85 +1.10
Powerboost Lenses Product	Hoya Sync III	Hoya Sync 5 Hoya Sync 9 Hoya Sync 13 Hoya Sync 20	+0.57 +0.95 +1.32 +1.89
Portfolio	Unity Relieve	Relieve 50 Relieve 70	+0.50 +0.70
	Shamir Relax	Relax 50 Relax 65 Relax 80	+0.50 +0.65 +0.80



-6.25DS OU Int Add +1.25 Near Add +2.00		
NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25

-6.25DS OU	Power Boost Le	enses	Boost at the Bottom
Int Add +1.25 Near Add +2.00	Zeiss Digital Lens	Digital 500 Digital 750 Digital 1000 Digital 1250	+0.50 +0.75 +1.00 +1.25
Diff. b/w Int & Add = 0.75 D	Eyezen	Eyezen +1 Eyezen +2 Eyezen +3 Eyezen +4	+0.40 +0.60 +0.85 +1.10
Powerboost Lenses Product	Hoya Sync III	Hoya Sync 5 Hoya Sync 9 Hoya Sync 13 Hoya Sync 20	+0.57 +0.95 +1.32 +1.89
Portfolio	Unity Relieve	Relieve 50 Relieve 70	+0.50 +0.70
	Shamir Relax	Relax 50 Relax 65 Relax 80	+0.50 +0.65 +0.80



-4.50	DS OU Int Add +1.25 Near A	Add +2.50
NVF Lens Design	Eff. ADD @ FRP	Eff. ADD @ Lens Top
Zeiss OfficeLens: Room, Desk, Book	Room +0.50 Desk +0.75 Book +1.25	Room +0.25 Desk +0.50 Book +1.00
Essilor Computer Lens	50% of the Backoff Power	0.00 to +0.25 (max back off -2.50)
Hoya iD WorkStyle 3: Space, Screen, Zoom	Space/Screen: 50% add @2.5mm below FRP Zoom: 50% of Add	Space +0.00 Screen +0.50 Zoom +1.00
Unity Via OfficePro: 10ft., 5 ft.	range of vision for: 10ft @110cm 5ft @80cm	10ft +0.33 5ft +0.67
Shamir Workspace/Computer	Workspace: 50% of Add Computer: 50% of Add plus +0.25D	Workspace +0.25 Computer +0.75
Shamir Autograph II Office	50% of the ADD or max of -2.25	Add reduction up to max -2.25

